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TITLE

Kalum,L. and Lund,H.

Garments with considerable variation in abrasion level and process for its production using cellulolytic enzymes

PAT 22-JAN-2000

SOURCE ORGANISM RESULT 1 A92311 ACCESSION VERSION Result No. DEFINITION KEYWORDS POCUS score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution. Score Saccharomyces cerevisiae (baker's yeast)
Saccharomyces cerevisiae
Saccharomyces cerevisiae
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetales; Saccharomycetaceae; Saccharomyces.

1 (bases 1 to 1174) Sequence 1 from Patent A92311 A92311.1 100.0 Query Match GI:6741083 Length 1060 1174 922 922 1060 1060 1060 1060 1060 1060 Ħ 6 A21793 6 A23635 6 A23644 თ თ AR163170 AR094307 FSOKCH A21795 AR220054 AR261282 BD010852 BD015226 BD002248 AR8072 AR163168 NCB19A17 AR261284 A68078 AR163169 MAL515703 AB003107 AR094308 AR163171 AR121354 BD144211 A41658 A68060 AR059002 AR072921 AR163160 A23953 A23957 A68070 AR163167 A68074 A68076 AR094306 A92311 AR094310 1174 bp EP0843041. ALIGNMENTS SUMMARIES ANG linear 113884 Sequence 1
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AR220054 Sequence AR261282 Sequence BD010852 Cellulase BD015226 Non-toxic BD002248 Cellulase AR261284 Sequence A68078 Sequence 73 AR163171 Sequence AR121354 Sequence AR059002 Sequence AR072921 Sequence AR163160 Sequence AR163167 Sequence A21793 H.insolens A23635 H. insolens A23644 H. insolens AR163170 Sequence AR094307 Sequence L29381 Fusarium ox AR094306 Sequence A68076 Sequence 71 AR163169 Sequence AJ515703 Melanocar BD144211 Polymer-c BD168986 Cellulase AR163168 Sequence BX284763 Neurospor A21795 F.oxysporum A68072 A41658 Sequence 1 A68060 Sequence 55 A68070 Sequence 65 Description AR094310 Sequence AR075389

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/mol_type="unassigned DNA"
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GCGGGTCCGAATCCTCGTGGTGCTGCGCCTCCTACGCCTCACCTTCACTTCCGGTCCCGGTCACCTCCACCTTCACTTCCGGTCCCGGCGGGGTGCTACGCGCTCACCTTCACTTCCGGTCCCGGCGGGGGACCTCACCTTCACTTCCGGTCCCGGGGGGGG	AGACTCCCTGGGCGGTGAACGACAATCTCGCCTACGGCTTCGCCGCGACGAGCATCGCCG 	TGTCCGACTTCAATGTCCAGTCGGGCTGCAACGGCGGCTCGGCCTACTCCTGCGCCGACC	GGCCCGGAAAGGCCGCCGTCAGCCAACCGGTCTACGCGTGCGATGCCAACTTCCAGCGCCGLLLLLLLLLL	CGGCCAGTGGCAGTGGCCAGTCCACGAGATACTGGGACTGCTGCAAGCCGTCGTGCGCTTT 	TGGGTCTACTCCGGTTCTTGGCACAACCCTGGCCGTGCACTTCCTCTGGTCGCCTCCG	GAGCAGCACCCCTCAAGCTGTACAGTTTCCACCCCGCTCTCTTTCTT	100.0%; larity 100.0%; Conservative 0	Unknown.  SM Uhknown.  Unclassified.  I (bases 1 to 1174)  I (bases 1 to 1074)  S Lund, H. and Kalum, L.  Ly Farents with considerable variat:  Ly Fatent: US 5958082-A 1 28-SEP-1999  Location/Qualifiers  11174  /mol_type="unassigned DNJ"	AR075389 11 Sequence 1 from patent US AR075389 AR075389.1 GI:10002139	<u>                                     </u>	TCTCACACCGACTTTGGGGGCGGAATCAGGCCCGTTTTAAAAAAAA	TTTTTGACCGCTCAATACATACATAACCTTCGATTCTTGTACATAGCACGCCGGTACACA	CAGCTTTTCGCACGAGGTGGCGGGACGGAGCAAGGAGACCGTCAACTTCGTCATGCATAT	CCTGTGTCTCTGGCACCACCTGCCAGAAGTTGAACGACTACTACTCGCAGTGCCTCTAAA 
TGCGCCTGCTACGCGCTCACCTT	AATCTCGCCTACGGCTTCGCCGC              AATCTCGCCTACGGCTTCGCCGG	GGCTGCAACGGCGGCTE 	CAACCGGTCTACGCGTGCGATGC 	acgagatactgcgactgctac 	ACAACCCTGGCCGCTGCACTTCC 	AGITICACCCGCICICITICA 	; DB 6; Leng 3.2e-199; es 0; Inde	e variation in abrasion -SEP-1999; ars wn"	DNA linea	RAAAAAAA 1174            RAAAAAAAA 1174	ATCAGGCCGTTTTAAAAAAA 	AACCITCGATTCTTGTACATAG                  AACCITCGATTCTTGTACATAG	acggagcaaggagaccgtcaac             acggagcaaggagaccgtcaac	agaagttgaacgactacto 
CACTICOGICCG 420	ω ω ω	CTCCTGCGCCGACC 300	CAACTTCCAGCGCC 240	GCCGTCGTGCGCTT 180	TCTGGTCGCCTCCG 120	TTCGGCCCCAGGA 60	th 1174; ls 0; Gaps 0;	level	r PAT 30-AUG-2000		AAAAAAAAAAAAAA 1140              AAAAAAAAAAAAA 1140	CACGCCGGTACACA 1080               CACGCCGGTACACA 1080	TTCGTCATGCATAT 1020              TCGTCATGCATAT 1020	GCAGTGCCTCTAAA 960               GCAGTGCCTCTAAA 960

AR094310  AR094310  DEFINITION  Sequence 11 from patent US 6001639.  ACCESSION  AR094310  VERSION  AR094310.1 GI:10021119  KEYWORDS  SOURCE  ORGANISM  Unclassified.  AUTHORS  AUUPINAL  FRATURES  FRATURES  FRATURES  SOURCE  JOURNAL  Takagi,S.  Endoglucanases  JOURNAL  FRATURES  Source  JOURNAL  FRATURES  Source  JOURNAL  FRATURES  Source  JOURNAL  JOURN	1021 TTT 1081 TCT 1081 TCT 1081 TCT 1141 AAA 1141 AAA	Db 841 GTGGCTGCACGTCTCAGAAGTGGGCTACAAGCATCGGCTTCAGCCGATGCACCA 930  Qy 901 CCTGTGTCTCTGGCACCACCTGCCAGAAGTTGAACGACTACTACTCGCCAGTGCCTCTAAA 960  po1 CCTGTGTCTCTGGCACCACCTGCCAGAAGTTGAACGACTACTACTCGCCAGTGCCTCTAAA 960  qy 961 CAGCTTTTCGCACGAGGTGGCCGGAAGGTAGACCGTCAACTTCGTCATGCATATA 1020  po61 CAGCTTTTCGCACGAGGTGGCCGGAAGGAAGGAAGCGTCAACTTCGTCATGCATAT 1020  po61 CAGCTTTTCGCACGAAGGTGGCGGGAAGGAAGGAACCGTCAACCTTCGTCATGCATAT 1020  po61 CAGCTTTTCGCACGAAGGTGGCGGGAAGCAAGGAACCGTCAACCTTCGTCATGCATAT 1020  Qy 1021 TTTTTGAGCGCCCAATACATAAACCTTCGAAGGAACCGTCAATAGCACGCGGGTACACA 1080	Db 661 ACCIGACGTTCAGGAGGTCAGGTGCAGGTGCAGAGAGTGTCACCGGCTCAGGGGAAGACGTCAGGTTCAACGAGGTTCACGGTCTTCACCCCCCCAAGCGGTGCAACGGTG 780  Qy 721 GCAAGCGCAACGACTCCAGCTTCCCCGTCTTCACCCCCCCAAGCGGTGGCAACGGTG 780  Db 721 GCAAGCGCAACGACGTCCAGCTTCCCCGTCTTCACCCCCCCC	Qy 421 TCGCCGGCAAGACAATGGTTGGTGAGTCAACGAGCACTTGGCGGAACGTAACC 480
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Sequence 65 from Patent WO9743409.
A68070.1 GI:4756870
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Dalboege,H., Diderichsen,B., Sandal,T. a
METHOD OF PROVIDING NOVEL DNA SEQUENCES
Patent: WO 9743409-A 65 20-NOW-1997;
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                                                                             AACGCAAACTTCCAGCGCATCACCGACCCCAACGCCAAGTCCGGCTGCGATGGCGGCTCC
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/translation="PPMMYAWMSLFLYGLQWAAPAFAADGRSTRYMDCCKESCSWPGK
/translation="PPMMYAWMSLFLYGLGWAAPAFAADGRSTRYMDCCKESCSWPGK
ALVNQPY/ARNANFQRITDPNAKSGCDGGSAFSCADQTPWAVSDDFAYGFAATALAGQ
SESSWCCACYELIFTSGFVAAKKWAVGSGTSTGGDLGSNHFDLANPGGGVGIFDGCSPQ
VGGLAGQRYGGVSRSECDSFPAALKPGCYWRYDWFKNADNESFSFRQVQCPAELVAR
TGCRRNDDGNFPAYQLFSSSTSBFVNQFTSTSTTSTSTTSSEPVQPTTPSGCTAERWA
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/mol_type="unassigned DNA"
/db_xref="taxon:32644"
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/db_xref="GI:4756871"
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Pred. No. 1.7e-70;
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           TGTAAGCCGTCGTGCTCGTGGCCCGGCAAGGCGCTCGTGAACCAGCCCGTCTACGCCCGC
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H.insolens mRNA for endonuclease
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A21793.1 GI:1246872
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                                           WO 9117243-A 1 14-MOV-1991;
Location/Qualifiers
1...1060
/organism="Humicola insolens"
/mol_type≈"unassigned RNA"
/strain="DSM 1800"
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vtranslation="MRSSPLLPSAVVAALPVLALAADGRSTRYWDCXKPSCGMAKKAP
vnQpvvscnaneQrIfdpaksscgcepggvayscadQfvaknvDpFalafyslacepaysiacepgy
EAGMCCACYELFTGSEPVAKKMYVQSTSTGGDLGSHPDLNIPGGGV9GFDGELVART
GGLPGQRYGGIssrnecdrfpdalkpgCywredwfknadnpsfsfrqvQcpaelVarT
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CGGNGWSGCTTCVAGSTCTKINDWYHQCL"
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/db_xref="GI:1246873"
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/translation="mrsspllesavvalpvlalaadgrstrymdcckescgwakkap
/translation="mrsspllesavvalpvlalaadgrstrymdcekescgwakkap
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EAGMCCACTELTTTSGFVAGKMMVQSTSTGGDLGSNhfDLNIEGGSVGIFDGCTPOP
GGLPGQRYGGISSRNECDRFPDALKEGCYWRFDWFKNADNPSFSFRQVQCDAELVART
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                                                                                                                                                                                                                                                                                                     Patent: EP 0495554-A 1 22-JUL-1992;
THE PROCTER & GAMBLE COMPANY
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Fungi; AsComycota; mitosporic Ascomycota; Humicola.

1 (bases 1 to 1060)

Convente, A.C., Busch, A. and Baseck, A.C.

Detergent compositions with high activity cellulase and quaternary
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                              /codon_start=1
/product="endoglucanase"
/protein_id="CAA01683.1"
/protein_id="CAA01683.1"
/db_xref="G1.832891"
/db_xref="REMTREMBL:CAA01683"
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GGLFGQRYGGLSSRNBCDRFDDALKEGCYMRFDWFKNADNPSFSFRQVQCFAELVART
GCRRUDDGNFFAVQLPSSGTSSFVNQFTSTSTTSTSTTSSPPVQPTTPSGCTAERWAQ
CGGNGWSGCTTCVAGSTCTKINDWYHQCL"
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Baseck, A.C., Busch, A. and Ceulemans, R.A.A.
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THE PROCTER & GAMBLE COMPANY
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/product="endoglucanase"
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RESULT 11

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Herbots, I.M. and Janeen, M.P.
Herbots, I.M. and Janeen, M.P.
Hydrophobic amines for cellulase stabilization in liquid detergent compositions containing anionic surfactant and cellulase Patent: EP 0633311-A i 11-JAN-1995;
PROCTER & GAMBLE US)
Other publication CA 2165771 950105.
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                                                         SCACCAGCTCTCCGGTCAACCAGCCTACCAGCACCAGCACCACGTCCACCTCCACCACCT
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/mol_type="unassigned DNA"
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292 GCGCCGACCAGACTCCCTGGGCGTGAACGACAATCTCGCCTACGGCTTCGCCGCGACGA 351 [	235 AGCGCCTGTCCGACTTCAATGTCCAGTCGGGCTGCAACGGCGGCTCGGCCTACTCCT 291	175 GCGCTTGGCCCGGGAAGGCCGCCGTCAGCCAACCGGTCTACGCGTGCGATGCCAACTTCC 234	115 CCTCCGCGGCCAGTGGCCAGTGGCCAGTCCACGAGATACTGGGACTGCTGCAAGCCGTCGT 174	55 CCAGGATGCGCTCTACTCCCGTTCTTCGCACAACCCTGGCCGCTGCACTTCCTCTGGTCG 114	Match 37.3%; Score 437.4; DB 6; Length 1060; Local Similarity 70.4%; Pred. No. 5.8e-68; Length 1060; Saps 4; Saps 4;	A68060  M Sequence 55 from Patent W09743409.  M A68060.  M A68060.1 GI:4756862  Humicola insolens EMARYPOTA; Fung; Ascomycota; mitosporic Ascomycota; Humicola.  E 1 (Dases 1 to 1060)  S Dalboege, H., Diderichsen, B., Sandal, T. and Kauppinen, S. METHOD OF PROVIDING NOVEL DNA SEQUENCES  L Patent: W0 9743409-A 55 20-NOV-1997; NOVONORDISK AS (DK) Location/Qualifiers  11060  /organism="Humicola insolens" /mol type="unassigned DNA" /fot rain="DSM 1800" /db xref="taxon:34413" 10927 /note="unnamed protein product" /codon start=1 /protein id="CAB42307.1" /db xref="GI:4756863" /db xref="RHSNEHE:CAB42307.1" /db xref="RHSSPLLESAVVALFVLALANDRESTRYWDCCKPSCGWAKKAP VNOPVFSCNANFORITDPDAKSGCEPGGVASCADQTPWAVNDDPALGFAATSIAGSN EAGMCCACYELTFTSGFTNACKNWVQSTSTGGDLGSNHFDLAN PGGGVGIFDGCTPQF GGLPGQRYGGISSNHECDREPDALKPGCYRFFDMFXNADNPSFSFRQVCCPAELVART GCRNNDDGNFPAVQIFSSSTSSFVNQPTSTSTTSTSTTSSFPVQPTTPSGCTAERWAQ Deptide  1072  _peptide /product="unnamed"	931 TGAACGACTACTACTCGCAGTGCCTCTAAAC 961 	871 GCGGTGGCATCGGCTTCAGCGGATGCACCACCTGTGTCTCTCGGCACCACCTGCCAGAAGT 930

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Royer, J.C., Moyer, D.L., Wendy, Y.T. and Shuster, J. Non-toxic, non-toxigenic, non-pathogenic fusarium and promoters and terminators for use therein patent: US 5837847-A, 7 17-NOV-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                     Unknown
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Pred. No. 5.8e-68;
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Didericheen,Bslashedrge.
Method of providing a hybrid polypeptide exhibiting
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Location/Qualifiers
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Search completed: July 7, 2004, 10:19:30 Job time : 7435 secs

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Minimum
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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6965.621 Million cell updates/sec
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### SUMMARIES

Result	Score	Query Match	Length	В	ID	Description
ا د د د	1174	100.0	1174	2	AAT39050	Aat39050 cDNA enco
2	1174	100.0	1174	N	3606EAVY	Aav39096 Monocompo
ىي	453.6	38.6	1261	N	AAV23748	Aav23748 Humicola
44	451.6	38.5	922	Ŋ	AAV15072	Aav15072 Hybrid DN
ບາ	439	37.4	1060	N	AAZ60178	Aaz60178 H. insole
0	437.4	37.3	1058	N	AAQ26405	Aag26405 Humicola
7	437.4	37.3	1060	Ņ	AAQ14856	Aaq14856 Humicola
89	437.4	37.3	1060	N	AAQ25932	Aaq25932 Cellulase
9	437.4	37.3	1060	Ŋ	AAQ30067	Aaq30067 Sequence
10	437.4	37.3	1060	N	AAQ29934	
11	437.4	37.3	1060	2	AAQ49941	
12	437.4	37.3	1060	N	AAQ41732	
<u>با</u>	437.4	37.3	1060	N	AAT10182	
14	437.4	37.3	1060	N	AAV15065	Aav15065 Humicola
15	437.4	37.3	1060	N	AAV16102	
16	437.4	37.3	1060	w	AAA53334	Aaa53334 Endogluca
17	435.8	37.1	1060	N	AAQ26380	Aaq26380 Endogluca
1.8	431	36.7	1060	N	AAQ30072	Aaq30072 43kD endo
19	429.4	36, Ø	1060	N	AAQ31181	Aaq31181 H. insole
20	412.8	35,2	922	N	AAV15073	Aav15073 Hybrid DN
21	393.4	υ. 3, ε	925	N	AAV15076	
22	390.6	υ ε,	807	N	AAV16104	Aav16104 Humicola
23	377.2	15.1	1,000	,	2 2 11 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Navr10378 Enmicola

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313.6	313.6	315.2	315.2	315.2	315.2	315.2	315.2	315.2	315.2	334.8	337	337.6	353.6	365.6	366.4	368.2	377.2	377.2	377.2	377.2	377.2
26.7	26.7	26.8	26.8	26.8	26.8	26.8	26,8	26.8	26.8	28.5	28.7	28.8	30.1	31.1	31.2	31.4	32.1	32.1	32.1	32.1	32.1
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AAC41733	AAT39075	AAV16103	AAZ60179	AAQ49942	AAQ29935	AAQ26382	AAQ26407	AAQ25933	AAQ14857	AAT39062	AAT39061	AAV15075	AAT66541	AAV29596	AAV15074	AAT39048	ADA37115	ABL59235	ABL60700	AAL43251	AAV13840
Aag41733 Dye trans	Aat39075 Chimeric	Aav16103 Fusarium	Aaz60179 F. oxyspo	Aaq49942 Endogluca	Aaq29935 Endogluca	Aaq26382 Endogluca	Aaq26407 Fusarium	Aaq25933 Cellulase	Aaq14857 Fusarium	Aat39062 Chimeric	Aat39061 Chimeric	Aav15075 Hybrid DN	Aat66541 20K-cellu	Aav29596 Humicola	Aav15074 Hybrid DN	Aat39048 cDNA enco	Ada37115 Humicola	Abl59235 Nucleotid	Abl60700 H. insole	Aal43251 Humicola	Aav13840 Humicola

# ALIGNMENTS

AAT39050 standard; cDNA; 1174 BP.

AAT39050;

20-MAY-1997 (first entry)

cDNA encoding cellulytic enzyme #4 of the invention

Cellulytic enzyme; endoglucanase; hydrolysis; cellulose; microorganism; plant cellulase; catalytic region; textile; backsteining; bio-polishing; stone-washing; cellulosic fabric; colour clarification; defibration; cell wall degradation; paper pulp; debarking; fibre modification; enzymatic de-inking; drainage improvement; 8s.

Thielavia terrestris.

RESULT 1 AART39020 1 DAART39020 AART3 ACC AART3 ACC AART3 ACC Cell KW 08-AUG-1995; 08-AUG-1995; 08-AUG-1995; 08-AUG-1995; 08-AUG-1995; 12-FEH-1996; 17-MAR-1995; 18-MAR-1996; 26-SEP-1996 W09629397-A1. 95DK-00000886. 95DK-00000887. 95DK-00000888. 95DK-00000272. 95DK-00000885. 96DK-00000137 96WO-DK000105. 59, /product= "endoglucanase" Location/Qualifiers 59. .959

(NOVO ) NOVO-NORDISK AS.

Schuelein M, Nielsen RI, Andersen LN, La Ihara M, Takagi Lassen ıgi S; SF, Kauppinen SM

WPI; 1996-443173/44. P-PSDB; AAW04928.

New endo:glucanase enzyme preparations - contg. conserved catalytic regions, useful for treating fabrics, textiles, plant material or paper

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Best Local Similarity
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                       ACCCGACGTTCACGTTCCAGCAGGTGCAGTGCCCCCGAGATCGTTGCCCGCCTCCGGCT
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ilarity 100.0%;
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                                                                                                                                                                                                                                                                                                                                                                AAV39096 standard; cDNA; 1174
          Claim 17; Page 9-10; 16pp; English
                                                  WPI; 1998-263308/24.
P-PSDB; AAW63624.
                                                                                Dund
                                                                                                                                          30-MAY-1997;
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                                                                                                                                                                                 EP843041-A1.
                                                                                                                                                                                                                                                    Thielavia terrestris
                                                                                                                                                                                                                                                                                                     Monocomponent endoglucanase encoding cDNA
                                                                                                                                                                                                                                                                                                                         21-SEP-1998
                                                                                                                                                                                                                                                                                                                                             AAV39096;
                              Pair of jeans - with abraded look
                                                                                                   (NOVO)
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                                                                                Kalum L;
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                                                                                                                                                                                                                                 Location/Qualifiers
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CC This cDNA encodes a monocomponent endoglucanase. This is a cellulolytic concerning to the fungal species Thielavia terrestris. This can be considered the theorems of invention of providing a pair of jeans made from the process of invention of providing a pair of jeans made from the fabric that has localised variations in the colour density of the fabric. The process involves providing the jeans with a stone-washed cor abraded look, where the variation corresponds to a delta remission corresponds to a first area of the jeans fabric is less than 12 percent. The process comprises selecting the codesired textile cutting pattern for jeans garment, positioning the pattern onto newly manufactured dyed twill fabric, cutting the jeans compared to a desired textile cutting the pair of jeans, optionally subjecting the pair of jeans to a desired to a desiring treatment, and subjecting the pair of jeans to an aqueous medium essentially free of bleaching chemicals. The abraded colook near stitching is different from the abraded look far from stitching treatment with a subjecting the pair of leans to an aqueous medium essentially free of bleaching chemicals.
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     GCAAGCGCAACGACTCCAGCTTCCCCGTCTTCACCCCCCAAGCGGTGGCAACGGTG
                                            GCAAGCGCAACGACTCCAGCTTCCCCGTCTTCACCCCCCAAGCGGTGGCAACGGTG
                                                                                                                              ACCCGACGITCACGITCCAGCAGGTGCAGTGCCCCGCCGAGATCGTTGCCCGCTCCGGCT
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                                                                                                                                                                                                                                   TCCCGGGGCGCTCAAGCCCGGCTGCCAGTGGCGGTTTGACTGGTTCCAGAACGCCGACA
                                                                                                                                                                                                                                                                                                       TCGGCGGCCTCCCGGCGCTCAATACGGCGGCATTTCGTCGCGCGACCAGTGCGATTCCT
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Pred. No. 9
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AAV23748 standard; CDNA; 1261 ΒP

AAV23748;

19-AUG-1998 (first entry

Humicola grisea cellulase cDNA sequence

Cellulase; variant; cellulolytic enzyme; endoglucanase V; EGV; paprotein engineering; detergent; fabric softener; pulp; debarking; defibration; fibre modification; degradation; ss. paper;

Humicola grisea

WO9812307-A1

17-SEP-1997; 97WO-DK000393

17-SEP-1996; 96DK-00001013

(NOVO ) NOVO-NORDISK AS

3 Christiansen ŗ Damgaard

WPI; 1998-217251/19.

properties e.g. activity, sensitivity stability. Cellulase enzyme variants - having amino acid changes which improve ty to surfactants, pH optimum or

Example 3; Page 77-78; 115pp; English

catalytic core domain exhibiting cellulolytic activity which is derived from a naturally occurring parental cellulase by amino acid residue substitution, insertion and/or deletion; and (with cellulase numbering):

(a) at position 5 has an Ala, Ser, or Thr residue; (b) at position 8 has a Phe or a Tyr residue; (c) at position 9 has a Phe, Trp, or Tyr residue; (d) at position 10 has a Asp residue; (e) at position 121 has a Asp The present invention describes a cellulase enzyme variant comprising a

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AAV15072;

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    residue. The present sequence represents the cDNA sequence of Humicola grisea cellulase from the present invention. The new cellulase enzymes can be used in e.g. detergent or fabric softener compositions, for biopolishing of new fabrics, for promoting a stone-washed look to cellulosic containing fabric, for pulp and paper applications, e.g. for debarking, defibration, fibre modification, drainage improvement, inter fibre bonding or for degradation of plant material e.g. for improving feed value. The cellulase variants have improved properties with respect to e.g. catalytic activity, altered sensitivity to anionic tensides, pH optimum or activity profile or stability
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1261
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                                                                                                                                                                                                                                                                                   CGGTGTCGGCATCTTTGATGGGTGCACCCCCCAGTTCGGAGGTCTCGCTGGCGAACGCTA
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                  CCCCGTCTTCACCCCCCAAGCGGTGGCAACGGTGGCACCGGGGACGTCGACT 803
                                                                                             GCAGTGCCCCCCGAGATCGTTGCCCGCTCCGGCTGCAAGCGAAGGACGACGACTCCAGCTT
                                                                                                                                                                          CCAGTGGCGGTTTGACTGGTTCCAGAACGCCGACAACCCCGACGTTCACGTTCCAGCAGGT
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                                                                                                                                                                                                                                          Matches 630;
                                                                                                                                                                                                                                                             Query Match
Best Local
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19-MAY-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12-MAY-1997;
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                                                                                                            TGCAAGCCGTCGTGCGCTTGGCCCGGGGAAGGCCGCGTCAGCCAACCGGTCTAGCGTGC
                                                                                                                                                               CTTCAGGTCGCGGCACCTGCTTCGCTGCTGATGGCAGGTCCACGCGGTACTGGGATTGC
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  AACSCHAACTTCCAGCGCATCACCGACCCCAACGCCAAGTCCGGC
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RESULT 5
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AAZGO178
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                                                                                                                                                                                                                                                                                                                        Endoglucanase; cellulase enzyme; detergent composition; anion surfactant;
degradation protection; liquid detergent; long term stability; ss.
                                                                                                                                                                                                                                                                                                                                                                                                         H. insolens endoglucanase enzyme coding sequence
     (PROC ) PROCTER & GAMBLE CO
                                                          28-JUN-1993;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cyclopentyl or cycloheptyl. The amine prevents the cellulase enzyme from becoming degraded. The composition is used as a liquid detergent, and have long term stability, it is applicable to the protection of an cellulase
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stabilisation.
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                                                       ACGCCGACAATCCGAGCTTCAGCTTCCGTCAGGTCCAGTGCCCAGCCGAGCTCGTCGCTC
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Pred. No. 1.7e-70;
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25-MAR-2003
                 The endoglucanase isolated from H.insolens DSM 1800 has Mr 43,000 and high cellulase activity (i.e. removes a minimum of 10% of radiolabelled carboxymethylcellulose (C14CWC)). The enzyme can be produced recombinantly using the cDNA coding sequence and used in detergent compositions along with a surface active agent, a builder system and a softening clay. See also AAQ26407. (Updated on 25-MAR-2003 to correct PN field.) (Updated on 24-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                        mat_peptide
                                                                                                                                                                                                                                                                                                                                                       Detergent; washing powder; cellulase; softening clay; C14CMC-method; flocculation; radio-labelled carboxymethylcellulase; ss.
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Sequence
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Pred. No. 3.3e-70;
0; Mismatches 246
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standard; DNA;

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Query Match
Best Local Similarity
Matches 655; Conserva
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Celiulase prepn. comprising endoglucanase enzyme - used in detergents celiulose-contg. fabrics or to improve drainage of paper pulp.
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P-PSDB; AAR15271.
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22-APR-1991;
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18-FEB-1992
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                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1060 BP; 190 A; 377 C; 288 G; 205 T; 0 U; 0 Other;
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25-MAR-2003
15-JAN-1993
                                                                                                                                                                                              GS Key
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                                                                                                                                                                                                                                                                                                                                                                                    AAQ25932;
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                                              16-JAN-1991;
06-NOV-1991;
                                                                                                                      22-JUL-1992.
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                   (PROC ) PROCTER & GAMBLE CO
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                                              The -43 kD endoglucanase derived from Humicola insolens, DSM 1800 is described in detail in co-pending Danish patent application No. DK 1159/90. As a detergent additive, it has a higher degree of specificity then Bacillus lentus serine protease. The term "higher degree of specificity" is defined as a protease which conditions degrades human insulin to fewer components. (Updated on 25-MAR-2003 to correct PN field.) (Updated on 24-OCT-2003 to standardise OS field)
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73. .927
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Best Local Query Match

Similarity

37.3%;

Score 437.4; Pred. No. 3.3

7.4; DB 2; 3.3e-70;

Sequence 1060 BP;

190 A; 377

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288

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205

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RESULT 10
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Best Local S
Matches 655
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25-MAR-2003
09-MAR-1993
                                                                                                                                                                                                                                                                                                                                                                                        The sequence is that of cDNA encoding an endoglucanase (alkaline cellulase) from Humicola insolens which is used with a polyvinyl-pyrrolidone (PVP) in a laundry detergent compand with eaction of the PVP and the endoglucanase in fabric colour maintenance upon laundering is superior to the sum of the individual actions of both these ingredients. See also AAQ29935. (Updated on 25-MAR 2003 to correct PN field.) (Update
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                               Sequence 1060 BP; 190 A; 377 C; 288 G; 205 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Laundry detergent compsns. - contg. alkali cellulase and PVP for fabric colour maintenance upon laundering.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 14; 23pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1992-341667/42.
P-PSDB; AAR27968.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Busch
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                                                                                                                                                                                                                                                       CCAGGATGCGCTCTACTCCCGTTCTTCGCACAACCCTGGCCGGCTGCACTTCCTCTGGTCG
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             GCGCCGACCAGACCCCATGGGCTGTGAACGACGACTTCGCGCTCGGTTTTGCTGCCACCT
                                 GCGCCGACCAGACTCCCTGGGCGGTGAACGACAATCTCGGCTACGGCTTCGCCGCGACGA 351
                                                                                                                                        GCGCTTGGCCCGGGAAGGCCGCCGTCAGCCAACCGGTCTACGCCGTGCGATGCCAACTTCC
                                                                                                                                                                                                        CCTCCGCGGCCAGTGGCAGTGCCAGTCCACGAGATACTGGGACTGCTGCAAGCCGTCGT
                                                                   AGCGTATCACGGACTTCGACGCCAAGTCCGGCTGCGAGCCGGGCGGTGTCGCCTACTCGT
                                                                                      AGCGCCTGTCCGACTTCAATGTCCAGTCCGGGCTGCAA----CGGCGGCTCGGCCTACTCCT
                                                                                                                                                                              CCCTTGCCGCTGATGGCAG----
                                                                                                                                                                                                                                    GCGGCTGGGCCAAGAAGGCTCCCGTGAACCAGCCTGTCTTTTCCTGCAACGCCAACTTCC
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                                                                                                                                                                                                                                                                                            Conservative
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(revised)
(first entry)
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73. .924
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70.4%;
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Pred. No. 3.3e-70;
0; Mismatches 246
                                                                                                                                                                               -GTCCACCCGCTACTGGGACTGCTGCAAGCCTTCGT
                                                                                                                                                                                                                                                                                                                   DB 2;
                                                                                                                                                                                                                                                                                            246;
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RESULT 11
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ase, partic. from Humicola insolens.
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Pred. No. 3.3e-70;
0; Mismatches 246;
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Query Match
                                                                                          the cellulase provides at least 10% removal of immobilised radioactive labelled carboxymethyl cellulose according to the C14CMC method at 25 x 10(-6)% by weight of the cellulase protein in the test solution. It can be used as part of a compsn. for inhibiting dye transfer. (Updated on 25 MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                    Compsn. tor
peroxidase,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sig_peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-MAR-2003
25-AUG-1993
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                                             Sequence 1060
                                                                                                                                                                                                                   The sequence is that encoding a cellulase which is characterised in that
                                                                                                                                                                                                                                                           Disclosure; Page 18-19; 28pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                             P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mccorquodale F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-NOV-1991;
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                                                                                                                                                                                                                                                                                                                                    for inhibiting dye transfer during fabric washing - contains ase, hydrogen peroxide, substrate and cellulase, esp. endo-
                                                                                                                                                                                                                                                                                                                                                                                                             AAR37150.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROCTER & GAMBLE CO
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                                               190 A; 377 C; 288 G; 205 T; 0 U; 0 Other;
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                                                    GCGGCGGCAATGGCTGGAGCGGCTGCACCACCTGCGTCGCTGGCAGCACTTGCACGAAGA
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                                                                                                                                                                                                                                                                                                                                                                                           The Humicola insolens DSM 1800 gene (AAT10182) coding for alkaline endoglucarase Carezyme (AAR86471), a derivative of a 43 kDa cellulase, was placed under the control of the promoter and terminator (see AAT10184 -85) of the Fusarium oxysporum trypsin-like protease SP387 gene in vector pDM151. Transformation of non-toxic, non-toxicenic, non-pathogenic, pDM151. Transformation of non-toxic, non-toxicenic, non-pathogenic protease deficient Fusarium gramminearum ATCC 20334 with the plasmid allowed prodin. of Carezyme at levels of 6.0 g/l host cell; over 90% of secreted protein was Carezyme. (Updated on 16-OCT-2003 to standardise OS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              used
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15-MAR-1995;
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                           AGCGCCTGTCCGACTTCAATGTCCAGTCGGGCTGCAA---CGGCGGCTCGGCCTACTCCT
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ous proteins, pref. enzymes, hormones, growth
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Humicola insolens EG V 43 KDa endoglucanase encoding DNA
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The present sequence encodes a protein with endoglucanase activity used in an example of the present invention. The present invention describes a novel method for providing a novel DNA sequence encoding a polypeptide (c) from a microorganism with an activity of interest. The method comprises: (i) PCR amplification of the DNA with PCR primers with homology to (a) CC known gene(s) encoding a polypeptide with an activity of interest; (ii) CC linking the obtained PCR product of a 5' structural gene sequence and a 3' structural gene sequence; (iii) expressing the resulting hybrid DNA sequence; (iv) screening for hybrid DNA sequence identified in step (iv). This method provides for cidentification and isolation of sequences from microorganisms without contained to cultivate and isolate the microorganisms.
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endoglucanase; surface-active; cellulase; detergent; cleaning;
performance; stain removal; soften; feel; colour; ss.
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active cellulase produced by Humicola. The enzyme can be used in a
detergent composition with a non-surface-active cellulase. This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  active cellulase - softens and improves fell of cotton fabrics without causing loss in weight or tensile strength.
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QY  871 GCGGTGGCATCGGCTTCAGCGGATCCACCTGTGTCTCTGGCACCACCTGCCAGAAGT 930  Db 839 GCGGCGATGGCTGCAGCGACCTGCCTGCACCACCTGCACCAGAAGA 896  QY  931 TGAACGACTACTACTGCAGTGCCTCTAAAC 961  Db 899 TTAATGACTGGTACCATCAGTGCCTGTAGAC 929
871 GCGGTGGCATCAGCGGATGCACCACCTGTGTGTCTCTGGCACCACCTGCCAGAAGT
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Search completed: July 7, 2004, 08:15:27 Job time : 723 secs

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Result
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Maximum Match 100%
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Maximum DB
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    pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
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/cgm2_6/ptodata/2/ina/6A_COMB.seq:*
/cgm2_6/ptodata/2/ina/6B_COMB.seq:*
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US-08-23-642A-1
US-08-389-423-1
US-08-140-008A-3
US-08-389-423-1
US-08-189-060B-55
US-09-189-060B-57
US-09-189-060B-67
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## ALIGNMENTS

RESULT 1 US-08-872-437-1

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APPLICANT: Lund, Henrik
APPLICANT: Kalum, Lisbeth
TITLE OF INVENTION: Garments With Considerable Variation In
TITLE OF INVENTION: Abrasion Level
FILE REFERENCE: 4888.200-US
CURRENT APPLICATION NUMBER: US/08/872,437
CURRENT FILING DATE: 1997-06-10
EARLIER APPLICATION NUMBER: 1276/96
EARLIER FILING DATE: 1996-11-13
NUMBER OF SEQ ID NOS: 2
SOSTWARE: FeatSEQ for Mindows Version 3.0
SEQ ID NO 1
LENGTH: 1174
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US-08-651-136C-11
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; Patent No. 6001639
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APPLICANT: Kauppinen, Markus S
APPLICANT: Lange, Lene
APPLICANT: Nielsen, Ruby I.
APPLICANT: Ihara, Michiko
APPLICANT: Takagi, Shinobu
TITLE OF INVENTION: No. 600163
NUMBER OF SQUENCES: 109
CORRESPONDENCE ADDRESS:
                                                                                                        APPLICANT: Schulein, Martin
APPLICANT: Andersen, Lene N.
APPLICANT: Lassen, Soren F.
APPLICANT: Kauppinen, Markus
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INFORMATION FOR SEQ ID NO:
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STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: CDNA
PEATURE:
NAME/KEY: CDS
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REGISTRATION NUMBER: 33,728
REGERENCE/DOCKET NUMBER: 4366.200-US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-867-0123
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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NAME: Lambiris, Elias J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
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CLASSIFICATION: 435
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New York
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                                 AGTTCGATATCGCCATGCCCGGCGGCGGCGCGCGCACTCTTCAACGGCTGCAGCTCGCAGT
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                 AGTTCGATATCGCCATGCCCGGCGGCGGCGTGGGCATCTTCAACGGCTGCAGCTCGCAGT
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US-09-229-911A-11
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Patent No. 6387690
GENERAL INFORMATION:
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COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                    CORRESPONDENCE ADDRESS:
CORRESPONDENCE NO. 63876900 No. 6387690disk of No. 6387690th America,
ADDRESSEE: No. 63876900 No. 6387690disk of No. 6387690th America,
                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                      TITLE OF INVENTION: NO. 6387690el Endoglucanases NUMBER OF SEQUENCES: 109
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                                                                                                     COUNTRY: United States of America
                                                                                                                    CITY: New York
STATE: New York
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Lassen, Soren F.
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SEQUENCE DESCRIPTION:
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Best Local Similarity
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INFORMATION FOR SEQ ID NO: 11:
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APPLICATION NUMBER: 08/651,136
FILING DATE: 21-MAY-1996
ATTORNEY AGENT INFORMATION:
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REFERENCE/DOCKET NUMBER: 4366.200-US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-867-0123
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FILING DATE: 13-Jan-1999
CLASSIFICATION: <Unknown>
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TYPE: nucleic acid
STRANDEDNESS: single
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        TCCCCGCGCCGCTCAAGCCCGGCTGCCAGTGGCGGTTTGACTGGTTCCAGAACGCCGACA
                                                              TCGGCGGCCTCCCCGGCGCTCAATACGGCGGCATTTCGTCGCGCGACCAGTGCGATTCCT
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APPLICANT: Borge, Diderichsen
TITLE OF INVENTION: Method Of Providing No. 62
FILE REFERENCE: 4772.204-US
CURRENT PELLICATION NUMBER: US/59/189,060B
CURRENT PELLING DATE: 1998-11-10
PRIOR APPLICATION NUMBER: PCT/DK97/00216
PRIOR FILING DATE: 1997-05-12
NUMBER OF SEQ ID NOS: 74
SOFTMARE: FastSEQ for Windows Version 4.0
SEQ ID NO 65
SEQ ID NO 65
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APPLICANT: Sandal, Thomas
APPLICANT: Kauppinen, Mar)
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Best Local Similarity
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TELEPAX: 513-627-4854
INFORMATION FOR SEQ ID NO: 1:
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NAME/KEY:
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LENGTH: 1060 base pairs
TYPE: nucleic acid
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: EP 91202880.0 FILING DATE: 06-NOV-1991 ATTORNEY/AGENT INFORMATION: NAME: PATEL, KEN K. REGISTRATION NUMBER: 33,988 REFERENCE/DOCKET NUMBER: CM393
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US-08-081-328-1
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; Patent No. 5520838
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APPLICANT: BAECK, A
APPLICANT: CEULEMAN
APPLICANT: BUSCH, I
                                                                                                                                                 TELEFAX: 513-627-0318
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0,
CURRENT APPLICATION DATA:
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MEDIUM TYPE: Diskette
COMPUTER: IBM PC compa
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NAME: ZERBY, KIM WILLIAM
REGISTRATION NUMBER: 32,
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ADDRESSEE: THE PROCTER & GAMBLE COMPANY
STREET: 11810 East Miami River Road
                                               FEATURE:
                                                                                                                                                                                 TELEPHONE: 513-627-2885
                                                                                                                               SEQUENCE CHARACTERISTICS:
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              NAME/KEY:
LOCATION:
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                                                                                          LENGTH: 1060 base pairs
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                                                               STRANDEDNESS:
TOPOLOGY: unl
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RESULT 7
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; Sequence 1, Application US/08232249
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Best Local Similarity
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Pred. No. 1.3e-78;
0; Mismatches 246;
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APPLICATION NUMBER: EP 91202882.6
PILING DATE: 06-NOV-91
ATTORNEY, AGENT INFORMATION:
NAME: ALLEN, GEORGE W.
REGISTRATION NUMBER: 26,143
REFERENCE/DOCKET NUMBER: CM-395
TELECOMMUNICATION INFORMATION:
TELEPHONE: 513-627-5946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: MCCORQUODALE, FINLAY (NMN)
APPLICANT: BUSCH, ALFRED (NMN)
TITLE OF INVENTION: DYE TRANSFER INHIBITING COMPOSITIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Release #1.0, Version CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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CITY: CINCINNATI
STATE: OHIO
COUNTRY: USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: THE PROCTER & GAMBLE COMPANY STREET: 5299 SPRING GROVE AVENUE
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Similarity 70.4%;
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   CTCCGCGGCCAGTGGCAGTGGCCACGAGATACTGGGACTGCTGCAAGCCGTCGT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 437.4; DB 1; Pred. No. 1.3e-78;
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Sequence 7, Application Patent No. 5837847
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ZIP: 10174-6401
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
COMPUTER: PC-DOS/MS-DOS
COMPUTER: PC-DOS/MS-DOS
COMPUTER: PC-DOS/MS-DOS
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                                                    CLASSIFICATION: 435
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US
ETLING DATE: 01-UN-19
APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Yoder, Wendy T
APPLICANT: Shuster, Jeffrey R
TITLE OF INVENTION: NON-TOXIC, NON-TOXIGENIC, 1
TITLE OF INVENTION: FUSARIUM EXPRESSION SYSTEM
                  FILING DATE: ATTORNEY/AGENT
                                                                                                                                                          SOFTWARE: PatentIn Release #1.0, Version CUURENT APPLICATION DATA:
APPLICATION NUMBER: US/08/921,426
                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
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Yoder, Wendy T
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     Dr.,
                    15-MAR-1995
INFORMATION:
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US-08-921-426-7
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LOCATION:
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TELEFAX: 212-878-9655
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                                   GCTCCGGCTGCAAGCGCAACGACGACTCCAGCTTCCCCGTCTTCACCCCCCCAAGCGGTG
                                                                                         ACGCCGACAACCCGACGTTCACGTTCCAGCAGGTGCAGTGCCCCCGCCGAGAGATCGTTGCCC
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RESULT 8 US-08-921-426-7

CITY: STATE: STREET:

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-08-833-642A-1
                                                                                                                                                                                                                                                                                                     TELEFAX: (513) 977-8141 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                         NAME/KEY:
LOCATION:
FEATURE:
                                                                                      LOCATION: FEATURE:
                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 1060 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/6
FILING DATE: April 8, 19
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 45202
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Ivan M. A. J. Herbots et al.
TITLE OF INVENTION: Liquid Detergent Compositions
TITLE OF INVENTION: Containing Cellulase and Amine
NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: CM
                                                                                                                                 FEATURE:
                                                                                                                                                                                 ORIGINAL SOURCE:
                                                                                                                                                                                             HYPOTHETICAL:
                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
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           NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE: O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC Compatible OPERATING SYSTEM: MS-DOS SOFTWARE: WordPerfect 6.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Jackie Ann Zurcher
ADDRESSEE: Dinsmore & Shohl LLP
STREET: 255 E Fifth Street
STREET: 1900 Chemed Center
                                                                                                                                               STRAIN:
                                                                                                                                                                                                                                                                                                                                                                        NAME: Zurcher, J. A.
REGISTRATION NUMBER: P42, 251
                                                                                                                                                                 ORGANISM:
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                                                                                                                    NAME/KEY:
                                                                                                                                                                                                                             TOPCLOGY:
                                                                                                                                                                                                                                        STRANDEDNESS: single
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RESULT 10 US-08-140-008A-3

Sequence 3, Application US/08140008A Patent No. 5914306

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Best Local Similarity 70.4%;
Matches 655; Conservative
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ON DER OSTEN, Claus
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                                                                                                                                                                                                                                                                                                               FEATURE:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0.
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FEATURE:
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ADDRESSEE: No. 59143060 No.
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LOCATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Lambiris, Elias J.
REGISTRATION NUMBER: 33,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 22
CLASSIFICATION:
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(212) 878-9655
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Pred. No. 1.3e-78;
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APPLICANT:
APPLICANT:
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                                                                        STATE: New York COUNTRY: United ZIP: 10174-6401
                                                                                                           CITY:
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Sequence 1, Application US/08389423 Patent No. 5948672
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: Patentin Release #1.0, Version #1.30
                                                                                            CURRENT APPLICATION DATA:
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ADDRESSEE: No. 59486
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                                              APPLICATION NUMBER:
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Schulein, Martin
Patkar, Shankant A.
Hagen, Fred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  405 Lexington
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14-FEB-1995
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ATTORNEY/AGENT INFORMATION:
NAME: Lambiris, Elias J.
REGISTRATION NUMBER: 33,728
REFERENCE/DOCKET NUMBER: 3469
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 212-878-9655
INFORMATION FOR SEQ ID NO:
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LOCATION:
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                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
FEATURE:
NAME/KEY:
LOCATION:
FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Moyer, Donna L
APPLICANT: Yoder, Mendy T
APPLICANT: Shuster, Jeffrey R
TITLE OF INVENTION: NON-TOXIC, NON-TOXIGENIC, J
TITLE OF INVENTION: FUSARIUM EXPRESSION SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
COMPUTER: IBM PC com
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CORRESPONDENCE ADDRESS:
ADDRESSEE: No. 60603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/816,915
                                                                                                                                                                                                                                                                                                                       TELEPHONE: 212-867-0123
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 405 Lexis
CITY: New York
STATE: New York
COUNTRY: USA
ZIP: 10174-6401
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: Patentin Pelan-
                                                                                                                                                                                                                                                                                                                                                                        NAME: Agris Dr., Cheryl H.
REGISTRATION NUMBER: 34,086
REFERENCE/DOCKET NUMBER: 4216.240-US
                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                       TYPE:
                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
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Pred. No. 1.3e-78;
0; Mismatches 246;
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US-09-189-060B-55
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APPLICANT: Borge, Diderichsen
TITLE OF INVENTION: Method of Providing No. 627096Bel DNA Sequences
FILE REFERENCE: 4772.204-US
CURRENT APPLICATION NUMBER: US/09/189,060B
CURRENT FILING DATE: 1998-11-10
PRIOR APPLICATION NUMBER: PCT/DK97/00216
PRIOR APPLICATION NUMBER: PCT/DK97/00216
PRIOR FILING DATE: 1997-05-12
NUMBER OF SEQ ID NOS: 74
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 55
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NAME/KEY: CDS
LOCATION: (10)...(927)
NAME/KEY: mat peptide
LOCATION: (73)...(927)
NAME/KEY: sig peptide
LOCATION: (10)...(72)
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Pred. No. 1.3e-78;
0; Mismatches 246;
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CURRENT APPLICATION NUMBER: US/09/230,665
CURRENT FILING DATE: 1999-01-29
FEARLIER APPLICATION UNBER: 60/023,125
FEARLIER FILING DATE: 1996-07-30
NUMBER OF SEQ ID NOS: 8
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 1
LENGTH: 1060
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Boyer, Stanton L
TITLE OF INVENTION: Detergent Composition Comprising Two Cellulase
TITLE OF INVENTION: Components, with and without a Cellulose-Binding Domain
FILE REFERENCE: 6191 Sequence Listing (8 Sequences)
                                                                                                                                                                                                                                                                NAME/KEY: sig_peptide
LOCATION: (10)..(72)
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LOCATION: (10)..(924)
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LOCATION: (73)..(924)
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                          GCGCTTGGCCCGGGAAGGCCGCCGTCAGCCGATCTACGCGTGCGATGCCAACTTCC
                                                                                           CCTCCGCGGCCAGTGGCAGTGGCCAGTCCACGAGATACTGGGACTGCTGCAAGCCGTCGT 174
                                                                                                                          CCAGGATGCGCTCTACTCCCGTTCTTCGCACAACCCTGGCCGCTGCACTTCCTCTGGTCG
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   GCGGCTGGGCCAAGAAGGCTCCCGTGAACCAGCCTGTCTTTTCCTGCAACGCCAACTTCC
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                                                                                                                                                                                    Score 437.4; DB 4;
Pred. No. 1.3e-78;
0; Mismatches 246;
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Patent No. 6423524
                                                                                                   GENERAL INFORMATION:

APPLICANT: Rasmussen, Grethe
APPLICANT: Mikeleen, Jan Moller
APPLICANT: Schulein, Martin
APPLICANT: Patkar, Shankant A.

APPLICANT: Hagen, Fred
TITLE OF INVENTION: A Cellulase Preparation Comprising
TITLE OF INVENTION: Endoglucanase Enzyme
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: NO. 64235240 NO. 6423524disk of NO. STREET: 405 Lexington Avenue, 64th Floor CITY: New York
STATE: New York
STATE: United States of America
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REGISTEATION NUMBER: 33,728
REFERENCE/DOCKET NUMBER: 3469
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-867-0123
TELEPHONE: 212-867-0123
TELEPHONE: 212-878-9655
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1060 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 37.3%; Score 437.4; DB 4; Length 1060; Best Local Similarity 70.4%; Pred. No. 1.3e-78; Matches 655; Conservative 0; Mismatches 246; Indels 30;
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: 9C-DOS/MS-DOS
SOFTMARE: Patentin Re-lease #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/189,028
FILING DATE:
CLASSIFICATION:
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NAME/KEY:
LOCATION:
FEATURE:
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ORIGINAL SOURCE:
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APPLICATION NUMBER: US 08/389,423
FILING DATE: 14-FEB-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY:
LOCATION:
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                                        | CCGGTCCCGTCGCCGGCAAGACAACGGTGGTGGTGCAGTCAACGAGCACTGGCGGCGACCTGG 471
                                                                                                                                    CTATTGCCGGCAGCAATGAGGCGGGCTGGTGCTGCCGCCTACGAGCTCACCTTCACAT
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QY 931 TGAACGACTACTCGCAGTGCCTCTAAAC 961	OY 871 GCGGTGGCATCGGCTTCAGCGGATGCACCACCTGTGTCTCTGGCACCACCTGCCAGAAGT	OY 814 CGGCCAGACGTCTCCCGGCGGCGGCAGTGCACGTCTCAGAAGTGGGCTCAGT	OY 772 GCAACGGTGGCACCGGGACGCCCACGTGGACTGGGCTGGG	OY 712 GCTCCGGCTGCAAGGGCAACGACGACTCCAGCTTCCCGGTCTTCACCCCCCAAGGGGTGTGL	Oy 652 ACGCCGACAACCCGACGTTCACGTTCCAGGAGGTGCCAGGTGCCCCGCCGAGATCGTTGCCC	Dy 592 GCGATTCCTTCCCCGCGCCCGCTCAAGCCCGGCTGCCAGTGGCAGTTTGACTGGTTCCAGA	QY 532 GCTCGCAGTTCGGCGGCCTCCCCGGGCGCTCAATACGGCGGCATTTCGTCGCGCGACCAGT	Oy 472 GAAGTAACCAGTTCGATATCGCCATGCCCGGCGGGGGGGG	
	CTGCCAGAAGT 930           TGCACGAAGA 898	GIGGGCTCAGI 870          GIGGGCTCAGI 838	IGCGCCTGGGT 813	CCCAAGCGGTG 771         CCCCTCCAGCA 718	GATCGITGCCC 711              CTCGICGCTC 658	CTGGTTCCAGA 651             CTGGTTCAAGA 598	GCGCGACCAGT 591              	CAACGGCTGCA 531 	

Search completed: July 7, 2004, 11:41:08 Job time: 123 secs

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Result
No.
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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                                                                                                                                                                                                                                                                                                 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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28.7
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Gapop 10.0 , Gapext 1.0
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/ cgn2 6/ptodata/1/pubpna/USO6_NEW_PUB.seq:*
/ cgn2 6/ptodata/1/pubpna/USO6_NEW_PUB.seq:*
/ cgn2 6/ptodata/1/pubpna/USO6_PUBCCMB.seq:*
/ cgn2 6/ptodata/1/pubpna/USO6_PUBCCMB.seq:*
/ cgn2 6/ptodata/1/pubpna/USO7_NEW_PUB.seq:*
/ cgn2 6/ptodata/1/pubpna/USO8_PUBCCMB.seq:*
/ cgn2 6/ptodata/1/pubpna/USO8_PUBCCMB.seq:*
/ cgn2 6/ptodata/1/pubpna/USO8_PUBCCMB.seq:*
/ cgn2 6/ptodata/1/pubpna/USO9_PUBCCMB.seq:*
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/ cgn2 6/ptodata/1/pubpna/USO9_PUBCCMB.seq:*
/ cgn2 6/ptodata/1/pubpna/USO9_NEW_PUB.seq:*
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Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                             Length DB
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 15 US-10-007-521-11
10 US-09-261-329-23
9 US-09-735-787-1
15 US-10-138-870-1
16 US-10-369-439-27891
16 US-10-416-328-7
13 US-10-416-328-7
13 US-10-432-290-18
15 US-10-007-521-7
15 US-10-007-521-7
15 US-10-007-521-5
15 US-10-007-521-5
15 US-10-138-870-3
15 US-10-138-870-3
15 US-10-138-870-3
15 US-10-138-870-3
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1307.995 Million cell updates/sec
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Sequence 11, Appl
Sequence 23, Appl
Sequence 1, Appli
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Sequence 7, Appli
Sequence 7, Appli
Sequence 7, Appli
Sequence 18, Appli
Sequence 3, Appli
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US-10-007-521-11
; Sequence 11, Application US/10007521
; Publication No. US20030054539A1
; GENERAL INFORMATION:
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PRIOR APPLICATION DATA:
APPLICATION UMBER: US/08/651,136
FILING DATE: 21-MAY-1996
ATTORNEY/ACENT INFORMATION:
NAME: Lambiris, Elias J.
                                                                                                                                    COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: 1BM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PATENTIN Release #1.0,

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Schulein, Martin
Andersen, Lene N.
Lassen, Soren F.
                                                                                                                                                                                                                                                                                                                         Takagi, Shinobu
TITLE OF INVENTION: No. US20030054539Alel Endoglucanases
NUMBER OF SEQUENCES: 109
                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: No. US20030054539Alo No. US20030054539Aldisk of No. US200300: STREET: 405 Lexington Avenue, 64th Floor
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669.885.2
                                                                                         APPLICATION NUMBER: US/10/007,521
FILING DATE: 10-Dec-2001
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                           STATE: New York
COUNTRY: United States
ZIP: 10174-6401
      REGISTRATION NUMBER: 33,728
                                                                                                                                                                                                                                                                     CITY: New York
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Ihara, Michiko
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15 US-10-007-521-51

15 US-10-007-521-31

15 US-10-007-521-77

15 US-10-007-521-77

15 US-10-007-521-77

15 US-10-007-521-57

15 US-10-007-521-33

17 US-0-437-963-86254

13 US-10-424-599-75014
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US-10-432-290-2

US-10-007-521-15

US-10-007-521-37

US-10-007-521-39
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US-10-432-290-12

US-10-007-521-25

US-10-007-521-19

US-10-007-521-17

US-10-432-290-8

US-10-432-290-6

US-10-432-290-6
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US-10-432-290-39
US-10-007-521-9
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                                                                                                                                                      Version #1.30
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Sequence 39, Appl
Sequence 9, Appli
Sequence 1, Appli
Sequence 12, Appl
Sequence 12, Appl
Sequence 12, Appl
Sequence 14, Appl
Sequence 17, Appl
Sequence 6, Appli
Sequence 6, Appli
Sequence 15, Appl
Sequence 17, Appl
Sequence 31, Appl
Sequence 32547, A
Sequence 20567, A
Sequence 20567, Appl
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Best Local Similarity
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INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: 4366.200-US TELECOMMUNICATION INFORMATION: TELEPHONE: 212-867-0123
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                   GCAAGCGCAACGACCTCCAGCTTCCCCCGTCTTCACCCCCCCAAGCGGTGGCAACGGTG
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                                                                           ACCCGACGTTCACGTTCCAGCAGGTGCAGTGCCCCGCCGAGATCGTTGCCCGCCTCCGGCT
                                                                                                                                        TCCCCGCGCCCCAAGCCCGGCTGCCAAGTGGCGATTTGACTGGTTCCAGAACGCCGACA
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                                                                                                                       TCCCCGCGCCCCAAGCCCGGCTGCCAGTGGCGGTTTGACTGGTTCCAGAACGCCGACA
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TYPE: nucleic acid
STRANDEDNESS: single
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APPLICANT: Schulein, Martin
APPLICANT: Schulein, Martin
APPLICANT: Christiansen, Lars
APPLICANT: Damgaard, Bo
APPLICANT: Damgaard, Bo
APPLICANT: Von Der Osten, Claus
ITITIB OF INVENTION: Cellulase Variants
FILIR REFERENCE: 4887.204-US
CURRENT APPLICATION NUMBER: US/09/261,329
CURRENT FILING DATE: 1999-03-03
EARLIER APPLICATION NUMBER: 1013/96
EARLIER FILING DATE: 1996-09-17
NUMBER OF SEQ ID NOS: 26
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 23
LENGTH: 1261
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 23, Application US/09261329 Publication No. US20030092097A1
                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Humicola grissea
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 192
                           206 ACCGGTCTACGCGTGCGATGCCAACTTCCAGCGCCTGTCCGACTTCAATGTCCAGTCGGG
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                                                                           GAGATACTGGGACTGCTGCAAGCCGTCGTGCGCCTTGGCCCGGGAAGGCCGCCGTCAGCCA
                                                                                                                       GGCCCTGGCGGCTGCGCCCCCTTGCCGCACTCGCCGCCGATGGCA-----AGTCGAC
                                                                                                                                          AACCCTGGCCGCTGCACTTCCTCTGGTCGCCTCCGCCGGCCAGTGGCCAGTGGCCAGTCCAC
                                                                                                                                                                                                               TTTCCACCCCGCTCTCTTTCTTCGGCCCCCAGGATGCGCTCTACTCCCCGTTCTTCGCAC
                                                           CAGATACTGGGACTGCTAAGCCATCGTGCTCTTGGCCCCGGAAAGGCACTCGTGAACCA
                                                                                                                                                                                 TTTTATTCACGCTCATTTATTCTAAAACTTCAATATGCGCTCTGCTCCTATTTTCCGCAC
 GCCTGTCTTCACTTGCGACGCCAAATTCCAGCGCATCACCGACCCCAATACCAAGTCGGG
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                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                       38.6%
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                                                                                                                                                                                                                                            Score 453.6; DB 10;
Pred. No. 1.5e-96;
0; Mismatches 189;
                                                                                                                                                                                                                                                                         Length 1261;
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RESULT 3
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Patent No. US20010036910A1
GENERAL INFORMATION:
                                                                                                         CURRENT APPLICATION DATA:

APPLICATION UNMBER: US/09/735,787

FILING DATE: 13-Dec-2000

CLASSIFICATION: <Unknown>
PRIOR APPLICATION: AUNKnown>
                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                 APPLICATION NUMBER: 09/189,028
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: A Cellulase Preparation Comprising
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             NAME: Lambiris, Elias J. REGISTRATION NUMBER: 33,728
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                                                                                                                                                                                                                                                                                                                     STATE: New York
COUNTRY: United States of America
                                                                                                                                                                                                                                                                                                                                                           CITY: New York
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REFERENCE/DOCKET NUMBER: 3469.214-US
                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: No. US20010036910Alo No. US20
STREET: 405 Lexington Avenue, 64th Floor
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Mikkelser, Jan Molle
Schulein, Martin
Patkar, Shankant A.
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; LOCATION: 10.924
; SEQUENCE DESCRIPTION: SEQ ID NO: US-09-735-787-1
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Best Local Similarity
Matches 635; Conserva
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TELEPAX: 212-878-9655
INFORMATION FOR SEQ ID NO: 1:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGINAL SOURCE:
STRAIN: DSM 1800
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                                                                                                                                                                                                                                                                                                                     359
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           ACCCCCACAATCCCAGCTTCAGCTTCCGTCAGGTCCAGTGCCCCAGCCGAGCTCGTCGCTC
                                 ACGCCGACAACCCGACGTTCACGTTCCAGCAGGTGCAGTGCCCCGCCGAGATCGTTGCCC
                                                                                                                 GCGATICCTTCCCCGCGCCGCTCAAGCCCGGCTGCCAGTGGCGGTTTGACTGGTTCCAGA
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LOCATION:
                                                                                       GCGATCGGTTCCCCCGACGCCCTCAAGCCCCGGCTGCTACTGGCGCTTCGACTGGTTCAAGA
                                                                                                                                                                                                                                         GCAGCAACCACTTCGATCTCAACATCCCCGGCGGCGCGCGTCGGCATCTTCGACGGATGCA
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STRANDEDNESS: single
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Pred. No. 9.2e-93;
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RESULT 4
US-10-138-870-1
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                                                                                                                                                                                INFORMATION FOR SEQ ID NO: 1
                  ORIGINAL SOURCE:
STRAIN: DSM 1800
                                                                                                                                                                                                                                 NAME: Lambiris, Elias J.
REGISTRATION NUMBER: 33,728
REFERENCE/DOCKET NUMBER: 3469.214-US
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/735,787
FILING DATE: 13-Dec-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
     FEATURE:
                                                      HYPOTHETICAL: NO
                                                                       MOLECULE TYPE: CDNA
                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/10/138,870
FILING DATE: 03-May-2002
CLASSIFICATION: duknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0,
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                                                                                                           STRANDEDNESS: single
                                                                                                                            TYPE: nucleic acid
                                                                                                                                                                                             TELEPHONE: 212-867-0123
TELEFAX: 212-878-9655
                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 09/189,028 FILING DATE: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: United States of America ZIP: 10174-6401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: New York
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STREET: 405 Lexington Avenue, 64th Floor
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                                                                                          TOPOLOGY: linear
                                                                                                                                             LENGTH:
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Mikkelsen, Jan Moller
Schulein, Martin
Patkar, Shankant A.
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; LOCATION: 10.924
; SEQUENCE DESCRIPTION: SEQ ID NO: 1:
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Best Local 9
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Pred. No. 9.2e-93;
0; Mismatches 246;
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US-10-369-493-27891
) Sequence 27891, Application US/10369493
) Publication No. US20030233675A1
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US-10-369-493-27891
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PRIOR FILING DATE: 2002-02-21
NUMBER OF SEQ ID MOS: 47374
SEQ ID NO 27891
LENGTH: 890
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APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
APPLICANT: Goldman, Barry S.
APPLICANT: Goldman, Barry S.
APPLICANT: Goldman, Barry S.
APPLICANT: Chen, Xianfeng
TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
TITLE OF INVENTION: PLANTS WITH IMPROVED PROPERTIES
FILE REFERENCE: 38-10($2052)B
CURRENT APPLICATION NUMBER: US/10/369,493
CURRENT FILING DATE: 2003-02-28
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                                                             GTAAACGACAGTTCGGCGGTCTCCCCCGGCGCTCAATATGGCGGCATCAGCTCCCGCAGCC 540
                                                                                          GCAGCTCGCAGTTCGGCGCCCCCCGGCGCTCAATACGGCGGCATTTCGTCGCGCGACC
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Publication No. US20040038841A1

GENERAL INFORMATION:
APPLICATION:
Cellulase preparations containing nonionic detergent and methor TITLE OF INVENTION: For treating fabrics
FILE REFERENCE: VIO3257 PCT
CURRENT APPLICATION NUMBER: US/10/416,328
CURRENT APPLICATION NUMBER: US/200-03-08-08
PRIOR APPLICATION NUMBER: JP 2000-343921
PRIOR FILING DATE: 2000-11-10
NUMBER OF SEQ ID NOS: 8
COMMANDER: PSEC ID NOS: 8
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SEQ ID NO 7
LENGTH: 1257
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Best Local Similarity 66.1%;
Matches 652; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: intron
LOCATION: (453)..(509)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA ORGANISM: Humicola insolens FEATURE:
                        293
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CGCCGACCAGACTCCCTGGGCGGTGAACGACAATCTCGCCTACGGCTTCGCCGCGACGAG 352
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                                                             GCGTCTCACTGACTTCGACGCCAAGTCCGGCTGCGAGCCGGCGGCGGTGTCGCCTACTCGTG
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RESULT 7
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                                                                                                                              SOFTWARE: Patentin
SEQ ID NO 18
                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 18, Application US/10432290 Publication No. US20040043400A1
LENGTH: 1257

TYPE: DNA
ORGANISM: Humicola insolens
FEATURE:
NAME/KEY: intron
LOCATION: (453)..(509)
                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/10/432,290
CURRENT FILING DATE: 2003-05-20
PRIOR APPLICATION NUMBER: DET/JP01/10188
PRIOR FILING DATE: 2001-11-21
NUMBER OF SEQ ID NOS: 43
                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: Endoglucanase Enzyme from Zygomycetes Having Deletion TITLE OF INVENTION: Cellulose Binding Domain FILE REFERENCE: VX032530 PCT
                                                                                                                                                                                                                                                                                                                                                     APPLICANT: MEIJI SEIKA KAISHA, LTD.
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Publication No. US20030054539A1
                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 212-878-9655
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
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APPLICANT: Schu
                                                                                                                                                                                                                                                                       / Match
Local Similarity 60.6%;
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Takagi, Shinobu
TITLE OF INVENTION: No. US20030054539A1el Endoglucanases
NUMBER OF SEQUENCES: 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: 4366.200-US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-867-0123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/651,136
FILING DATE: 21-MAY-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                               SEQUENCE DESCRIPTION: SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
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CORRESPONDENCE ADDRESS:
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                                    182
 263
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GGGCTGCAACGGCGGCTCGGCCTACTCCTGCGCCGACCAGACTCCCTGGGCGGTGAACGA
                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
LOCATION:
                                                              CAACCESTCTACECGAGECGAACCTTCCAGECCTGTCGACTTCAATGTCCAGTC
                                                                                                          AACCAGGTACTGGGACTGCTGCAAGCCCTCATGCGCCTGGGATGAGAAGGCGGCTGTCAG
                                                                                                                                            CACGAGATACTGGGACTGCTGCAAGCCGTCGTGCGCTTGGCCCCGGGAAGGCCGCCGTCAG
                                                                                                                                                                                                                    CACAACCCTGGCCGCTGCACTTCCTCTGGTCGCCTCCGCGGCCAGTGGCAGTGGCCAGTC
                                    CCGGCCGGTCACAACATGCGACAGGAACAACAGCCCCCTTTCGCCCGGCGCTGTGAGCGG
                                                                                                                                                                                CAGCATCTTGATCGGCCTTGTTGCCGGCGTCGCTCAGAGCTCTGGCTCTGGCCATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STATE: New York
COUNTRY: United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: No. US20030054539A10 No. US20
STREET: 405 Lexington Avenue, 64th Floor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ENGTH: 1154 base pairs
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Ihara, Michiko
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Lassen, Soren F.
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                                                                                                                                                                                                                                                    Score 369.8; DB 15; Length 1154;
Pred. No. 7.1e-77;
9; Mismatches 417; Indels 16;
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US-08-81-636A-30
18-08-80e-08-9, Application US/08841636A
; Sequence 30, Application US/08841636A
; Publication No. US20020168751A1
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                                                   GENERAL INFORMATION:
APPLICANT: Mietti
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APPLICANT:
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                                                                                                                                                                                                 AAAAAAAAAAAAAAAAAAA 1151
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                                                                                                                                                                                                                                                                       TACATAACCTTCGATTCTTGTACATAG----CACGCCGGTACACATCTCACACCGACTTT 1095
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Vehmaanper, Jari
                                                   Miettinen-Oinonen,
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US-08-841-636A-30
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FILING DATE: 30-APR-1997
CLASSFEICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/005,335
FILING DATE: 17-0CT-1995
PRIOR APPLICATION NUMBER: US 60/007,926
FILING DATE: 04-DEC-1995
                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 936 base pairs
TYPB: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 41,306
REFERENCE/DOCKET NUMBER: 17
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/F196/00550
FILING DATE: 17-CCT-1996
ATTORNEY/AGENT INFORMATION:
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PRIOR APPLICATION UNIMBER: US 08/732,181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: U
FILING DATE: 28-JUN-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: 1
ORIGINAL SOURCE:
                                                                                                   FEATURE:
                                                                                                                                                                     EATURE:
                                                                                                                                                                                    NAME/KEY: exon
LOCATION: 33..115
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-JOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 110.
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                                              NAME/KEY: exon
LOCATION: 506..881
OTHER INFORMATION:
                                                                                                                 OTHER INFORMATION:
                                                                                                                                                                                                                                                                                        ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Timothy J. Shea, Jr.
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: Lantto, Raija
: Elovainio, Minna
: Joutsjoki, Vesa
: Paloheimo, Marja
: Suominen, Pirkko
INVENTION: NOVEL CELLULASES, T
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                                                                                                                                                                                                                                                                      helanocarpus albomyces
ALKO4237
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Length 936;
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Query Match

Score 353.6;

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                                                                                                                                                                                                                                                                                                                                       RESULT 10
                                                                                                                                                                                                                                                                  Sequence 3, Application US/10007521
Publication No. US20030054539A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                            Lange, Lene
Nielsen, Ruby I.
Ihara, Michiko
Takagi, Shinobu
TITLE OF INVENTION: NO. US20030054539Alel Endoglucanases
                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: No. US20030054539A10 No. US20030054539A1disk of No. US200300
STREET: 405 Lexington Avenue, 64th Floor
                                                                                                                                                                                                                                                  APPLICANT: Schulein, Martin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             183
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              CITY: New York
STATE: New York
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COUNTRY: United States of America
                                                                                               OF SEQUENCES:
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762 815 702 755 642

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US-10-007-521-3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Loca1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/007,521
FILING DATE: 10-Dec-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION: TELEPHONE: 212-867-0123
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               523 CATTICCAAGGAAGAGTGCGAATICCTTCCCGGAGGCCCTCAAGCCCGGCTGCAACTGGCGC 582
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                                               TCGTCGCGCGACCAGTGCGATTCCTTCCCCGGGCCGCTCAAGCCCGGCTGCCAGTGGCGG 635
                                                                                                                                     GGCTGCAGCTCGCAGTTCGGCGGCCTCCC-----CGGCGCTCAATACGGCGGCATT
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STRANDEDNESS: single
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REFERENCE/DOCKET NUMBER: 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/651,136 FILING DATE: 21-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                     GCCTGCACCGACCAGTACGGCGCTCCCCCGAACGGCTGGGGCGACCGCTACGGCGGCATC 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: linear
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Pred. No. 3.3e-69;
0; Mismatches 280
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US-10-007-521-5
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Publication No. US20030054539A1
GENERAL INFORMATION:
                                                                                                                            INFORMATION FOR SEQ ID NO: 5:
                                                                                                                                                                                                           APPLICATION NUMBER: US/08/651,136
FILLING DATE: 21-MAY-1996
ATTORNEY/AGENT INFORMATION:
NAME: Lambiris, Elias J.
REGISTRATION NUMBER: 33,728
REFERENCE/DOCKET NUMBER: 4366.200-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: No. US20030054539Alo No. US20030054539Aldisk of No. US200300.
STRRET: 405 Lexington Avenue, 64th Floor
                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA: US/10/007,521
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MEDIUM TYPE: Floppy disk
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TITLE OF INVENTION: No. US20030054539Alel Endoglucanases
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MOLECULE TYPE: cDNA
                                                                                                     SEQUENCE CHARACTERISTICS:
                                                                                                                                            TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-867-0123
TELEFAX: 212-878-9655
                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 109
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: New York
STATE: New York
COUNTRY: United States of America
ZIP: 10174-6401
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                                    LENGTH: 927 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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CLASSIFICATION: <Unknown>
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SEQUENCE DESCRIPTION: SEQ ID NO: 5:
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   AGCACTTGCACGAAGATTAATGACTGSTACCATCAGTGCCTGTA 926
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Mismatches 277; Indels 33;
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RESULT 12 US-09-735-787-3

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Patent No. US20010036910A1
GENERAL INFORMATION:
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Best Local 9
                                                                                                                                                                                                                                                                                                           Matches
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                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 09/189,028
FILING DATE: <UNKNOWNS
PILING DATE: <UNKNOWNS
ATTORNEY/AFRENT INFORMATION:
NAME: Lambiris, Elias J.
REGISTRATION NUMBER: 33,728
REFERENCE/DOCKET NUMBER: 3469.214-US
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/735,787
FILING DATE: 13-Dec-2000
CLASSIFICATION: <Unknown>
FRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Rasmussen, Grethe
Mikkelsen, Jan Moller
Schulein, Martin
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MEDIUM TYPE: Floppy disk
COMPUTER: HAM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGINAL SOURCE:
ORGANISM: Fusarium oxysporum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear MOLECULE TYPE: cDNA HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE DESCRIPTION: SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: A Cellulase Preparation Comprising an
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263 GGGCTGCAA---CGGCGGCTGGCCTACTCCTGCGCCGACCAGCTCCCTGGGCGGTGAA 319
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                                                                                                      203
                                                                                                                                            168 TACTCGATACTGGGATTGCTGCAAGCCTTCTTGCTCTTGGAGCGGAAAGGCTGCTGTCAA 227
                                                                                                                                                                                      143
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                                                               CGCCCCTGCTTTAACTTGTGATAAGAACGACAACCCCATTTCCAACACCAATGCTGTCAA 287
                                                                                               CCAACCGGTCTACGCGTGCCAATGCCAACTTCCAGCGCCTGTCCGACTTCAATGTCCAGTC 262
                                                                                                                                                                     CACGAGATACTGGGACTGCTGCAAGCCGTCGTGCGCTTGGCCCGGGAAAGCCCGCCGTCAG 202
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TYPE: nucleic acid
STRANDEDNESS: single
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                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KBY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN: DSM 2672
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                                                                                                                                                                                                                                                                                                         Score 315.2; DB 9;
Pred. No. 5.1e-64;
0; Mismatches 208;
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RESULT 13
US-10-138-870-3
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                                                APPLICATION NUMBER: 09/189,028 FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                      OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                     ZIP: 10174-6401
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: No. US20030119167Aio No. US20030119167Aidisk of No. US20030119
STREET: 405 Lexington Avenue, 64th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 33
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                                                                                                                                     PRIOR APPLICATION DATA:
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                                                                                                                                                     APPLICATION NUMBER: US/10/138,870 FILING DATE: 03-May-2002 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Lambiris, Blias J.
REGISTRATION NUMBER: 33,728
REFERENCE/DOCKET NUMBER: 3469.214-US
                                                                                                 APPLICATION NUMBER: US/09/735,787 FILING DATE: 13-Dec-2000
                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                             CITY: New York
STATE: New York
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OF INVENTION: A Cellulase Preparation Comprising
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Schulein, Martin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear MOLECULE TYPE: cDNA HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION:
                     768
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              143 САССАСАТАСТОЗСАСТССТВСАХССССТССТВСССТТВСССССССБАЛАССССССССТСАС
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83 CACAACCCTGGCCGCTGCACTTCCTCTGGTCGCCTCCGCGGCCAGTGGCAGTGGCCAGTC 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                          GRGCTGCGCTGCTACGCGCTCACCTTCACCTTCCGGTCGCCGGCCAAGACAATGGT 439
                                                                                                          CCAGCAGGTGCAGTGCCCCGCGAGATCCGTTGCCCGCTCCGGCTGCAACGCACGACGA
                                                                                                                                                                         GCCCGGCTGCCAGTGGCGGTTTGACTGGTTCCAGAACGCCGACAACCCGACGTTCACGTT
                                                                                                                                                                                                                                                    GGTGCAGTCAACGAGCACTGGCGGCGACCTGGGAAGTAACCAGTTCGATATCGCCATGCC
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LOCATION:
                     CTCCAGCTTCCCTGCCTTCA
                                                      CTCCAGCTTCCCCGTCTTCA 756
                                                                                      TGAGCAGGTTCAGTGCCCCCAAGGCTCTCCTCGACATCAGTGGATGCAAGCGTGATGACGA
                                                                                                                                                       GGACGGTTGCCACTGGCGATTCGACTGGTTCGAGAACGCCGACAACCCTGACTTCACCTT
                                                                                                                                                                                                                           TGCCCAGTACGGCGGTATCTCCTCCCGAAGCGAATGTGATAGCTACCCCGAGCTTCTCAA
                                                                                                                                                                                                                                                                                            CGGCGGTGGTGTCGGTATCTTCGACGGCTGCACCTCTGAGTTCGGCAAGGCTCTCGGCGG
                                                                                                                                                                                                                                                                                                                                                                  CGTCCAGTCCACCAACACTGGAGGTGATCTCGGCGACAACCACTTCGATCTCATGATGCC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAACCGGTCTACGCGTGCGATGCCAACTTCCAGCGCCTGTCCGACTTCAATGTCCAGTC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 212-878-9655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 1473 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: 212-867-0123
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US-10-007-521-23
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Publication No. US20030054539A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                      Matches 544;
                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 4366.200-US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-867-0123
TELEFAX: 212-878-9655
INFORMATION FOR SEQ ID NO: 23:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/10/007,521
FILING DATE: 10-Dec-2001
CLASSIFICATION: cUnknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: 1BM PC compatible
COMPUTER: 1BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
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TITLE OF INVENTION: No. US20030054539Alel Endoglucanases
NUMBER OF SEQUENCES: 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/651,136
FILLING DATE: 21-MAY-1996
ATTORNEY/AGENT INFORMATION:
NAME: Lambiris, Elias J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
                          274
                                                                                                                                                                                           157
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STATE: New York
COUNTRY: United States of America
TIP: 10174-6401
TIP: TOTTE FORM:
GCGGCTCGGCCTACTCCTGCGCCGAACCAGACTCCCTGGGCGGTGAACGACAATCTCGCCT 333
                                                                                                                                                                                         ACTECTECAAGCCETCGTGCGCTTGGCCCGGGAAGGCCGCCGTCAGCCAACCGGTCTACG
                                                                                                                                                                                                                                                                            CTGCACTTCCTCTGGTCGCCTCCGCGGCCAGTGGCAAGTGCCAGGAGATACTGGG 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: nucleic acid
STRANDEDNESS: single
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STREET: 405 Lexington Avenue, 64th Floor
                                                                 CCTGCGACATCAACGACAACGCCCAGACGCCGAGCGATCTGCTCAAGTCGTCCTGTGATG 205
                                                                                                      CGTGCGATGCCAACTTCCAGCGCCTGTCCGACTTCAAT---GTCCAGTCGGGCTGCAACG
                                                                                                                                                    ACTIGITIGIA AGECCITOTIGITA CONTROLA AGECATECTICA AGECCEGICA 145
                                                                                                                                                                                                                                   CGGCTCTGCTCCTATTTCCTGCCACTGAAGCCACTAGCGGCGTGACAACCAGGTACTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER: 33,728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                              OCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ENGTH: 885 base pairs
                                                                                                                                                                                                                                                                                                                        Conservative
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Kauppinen, Markus S.
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62.7%;
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US-10-007-521-21
US-10-007-521-21
; Sequence 21, Applicatio
; Publication No. US20030
; Publication INFORMATION:
; GENERAL INFORMATION:
; APPLICANT: Schul
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             ZIP: 10174-6401
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: No. US20030054539A10 No. US20030054539A1disk of No. US200300
STREET: 405 Lexington Avenue, 64th Floor
                                                                                                                                                                                                                                                             Takagi, Shinobu
TITLE OF INVENTION: No. US20030054539A1el Endoglucanases
                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 109
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         454 GCACTGGCGGCGACCTGGGAAGTAACCAGTTCGATATCGCCATGCCCGGCGGCGGCGGCGGCGGTGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              206 GCGGCAGCGCCTACTACTGCAGCAACCAGGGCCCATGGGCCGTGAACGACAGCCTTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    871 GCGGTGGCATCGGCTTCAGCGGATGCACCACCTGTGTCTCTCTGGCACCACCTGCCAGAAGT 930
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                                                                                                                 STATE: New York
COUNTRY: United States of America
                                                                                                                                                           CITY: New York
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wo. US20030054539A1
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Thara, Michiko
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SEQUENCE DESCRIPTION: SEQ ID NO: 21: US-10-007-521-21
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Best Local Similarity
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TELEPAX: 211-878-9655
INFORMATION FOR SEQ ID NO: 21:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/651,136
FILING DATE: 21-MAY-1996
ATTORNEY/AGENT INFORMATION:
NAME: Lambiris, Elias J.
NAME: Tambiris, Elias J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/007,521
FILING DATE: 10-Dec-2001
CLASSIFICATION: CUNKNOWN>
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REFERENCE/DOCKET NUMBER: 4366.200-US
TELECOMMUNICATION INFORMATION:
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LOCATION: 42..971
 GCCCGCTCCGGCTGCAAGCGCAACGACGACTCCAGCTTCCCCCGTCTTCACCCCC 761
                                                               CAGAACGCCGACAACCCGACGTTCACGTTCCAGCAGGTGCAGGTGCCCGGCCGAGATCGTT 707
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STRANDEDNESS: single
                                                                                                         CAGTGCTCCCAAATCCCCTCGGCCCTGCAGCCCGGCTGCAACTGGCGGTACGACTGGTTC
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Pred. No. 5.9e-61;
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Search completed: July 7, 2004, 15:01:27 Job time : 4335 secs

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Result
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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Maximum DB seg length: 200000000
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                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
          Score
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Query
Match Length DB
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Copyright (c) 1993 - 2004 Compugen Ltd.
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## ALIGNMENTS

	COMMENT	MEDLINE	JOURNAL	TITLE	AUTHORS	REFERENCE		ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION	DEFINITION	LOCUS	BU064446	RESULT 1
Department of Flant Hology Michigan State University East Lansing, MI 48824, USA Tel: 517 432 2939 Fax: 517 353 1926 Email: trail@msu.edu Plate: 4 row: 0 column: 05.	Contact: Frances Trail	22508120	Fusarium graminearum) Fungal Genet. Biol. 38 (2), 187-197 (2003)	Analysis of expressed sequence tags from Gibberella zeae (anamorph	Trail, F., Xu, JR., San Miguel, P., Halgren, R.G. and Kistler, H.C.	1 (bases 1 to 688)	Bukaryota; kungi; Ascomycota; kezizomycotina; soluariomycetes, Hypocreomycetidae; Hypocreales; Nectriaceae; Gibberella.	Gibberella zeae	Gibberella zeae	BST.	BU064446.1 GI:22504735	sequence. BU064446	5_T3 Witrogen-starved mycelia Gibberella zea	BU064446 688 bp mRNA linear EST 26-AUG-2002		

227.4 213 207.6 138.2

19.4 18.1 17.7

BU064446 BE585661 CB928003 CB408403

BU064446 Fgr 4 005 BE585661 EST#6FSP6 CB928003 ABA1 35 G CB408403 IPG004F12

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                                                                                       Triticum aestivum
Sukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Pooideae; Triticeae; Triticum.
Fellers,J.P., Li,W.L., Hill-Ambroz,K., Matthews,A. and Gill,B.S. The structure and function of the expressed portion of the wheat genomes - Kansas State Unversity. Fusarium graminearum infected
                                                                                                                                                                                                                                                               BE585661.1 GI:9838604
                                                                                                                                                                                                                                                                                                                   mRNA sequence.
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/db_xref="taxon:5518"
/clone_lib="Nitrogen-starved mycelia"
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; Pred. No. 1.7e-
0; Mismatches
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Dept. of Plant Pathology, 4005 11
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Unpublished (2000)
Contact: John Fellers
US Department of Agriculture, Agriculture Research Service,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: jpf@alfalfa.ksu.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tel: 785-532-2367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fax: 785-532-6167
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          GTACGGCGGCATCTCTTTCCGAAGCCA-TGTGACAGTTTCCCCCGAGCTGCTCAAGGATGG
                                                           TGGTGTCGGTÄTÄTTCGÄTGGÄTGCÄCCTCTGÄGTTCGGCAAGCCCCTCGGTGGTGCTCA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plants were grown in the greenhouse. Spikes were sprayed with Fusarium graminearum (at what stage). Total RNA, and poly(A) RNA were prepared from infected spikes. cDNA was prepared using the SmartTM PCR cDNA synthesis kit from Clonetech. cDNA was cloned into the pGEM-T easy vector
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/clone="EST#6PSP6_D02_d2_014"
/tissue_type="Spike"
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/cultivar="Sumai3"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /dev_stage="Adult plant"
/lab_host="E. coli JM109"
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Pred. No. 6.7e-15;
0; Mismatches 190;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                    Local Similarity
143 CACGAGATACTGGGACTGCCAAGCCGTCGTGGGCTTGGCCCGGGAAGGCCGCCGTCAG 202
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بن
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: mmpratt@uga.edu
Library constructed by Dr. Yutaka Suzuki and Dr. Sumio Sugano in
the Human Genome Center, University of Tokyo Institute of Medical
Science; plant material and RNA prepared at Texas A & M University;
sequencing done in the Laboratory for Genomics and Bioinformatics,
University of Georgia. Sequence ends have been trimmed to exclude
vector and regions below Phred quality 16. Three-prime sequences
vector and regions below thred commality 16. Three-prime sequences
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The University of Georgia, Department of Plant Biology
Plant Sciences Building, Rm. 2502, Athens, GA 30602-7271,
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Contact: Cordonnier-Pratt MM
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Eastman,A. and Pratt,L.H.
An EST database from Sorghum: ABA1-treated seedlings
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EST.
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                                                                                               CÁCTETTÉTEGECETGGECEGECÉTTCGCCGTGAGTGETTETGGAAGCGGCCACTE
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706 583 0210
                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="ABA1 35 G07 A012"

/lab host="PH10B-TI phage-resistant E. coli"

/lab host="PH10B-TI phage-resistant E. coli"

/clone lib="Abacisic acid-treated seedlings"

/clone lib="Abacisic acid-treated seedlings"

/note="Vector: PME18S-FL3; Site_1: XhoI; Site_2: XhoI; The library was prepared from polyA- RNA from seedlings grown in hydroponic culture. After 12 days, medium was supplemented with 1 mM abscisic acid (ABA), while leaves supplemented with a solution of 1 mM ABA. Roots and leaves were misted with a solution of 1 mM ABA. Hoots and leaves were harvested after 3, 6, 12, and 24 hr and material from all time points was combined prior to RNA isolation. Double-stranded cDNA was cloned unidirectionally incoming different reality close of the warming. PLA vector (sprime all from the library for the stranded cDNA was cloned unidirectionally incoming the stranded cDNA was cloned un
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                                                                                                                                                                                                                                                                                                                                                             different DraIII sites of the pMEIBS-F13 vector (5-prime DraIII site is CACTGTGTG, 3-prime DraIII site is CACCATGTGTG). XhoI excises the cDNA insert."
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/cultivar="IS3620C"
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Seq primer: T3 21mer
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Tel: 1-775-784-6480
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University of Nevada, Reno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Comparison of gene representation in midguts from two phytophagous insects, Bombyx mori and Ips pini, using expressed sequence tags
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota; Reoptera; Endopterygota; Coleoptera; Polyphaga; Cucujiformia; Phytophaga; Scolytidae; Ips.

1 (bases 1 to 668)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: crt@unr.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fax: 1-775-784-1419
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                                                                                                                                                                                                                                                                                                                                                                                                          quality sequence stop: 668.
                                         /dev stage="adult"
/clome lib="JH III-treated male I. pini midguts"
/clome e "Vector: Lambda Uni-Zap XR, Bluescript SK.; As
/note="Vector: Lambda Uni-Zap XR, Bluescript SK.; As
                                                                                                                                                                                                                              clone="IPG004F12"
                                                                                                                                                                                                                                                           /db_xref="taxon:102803"
                                                                                                                                                                                                                                                                                 organism="Ips pini"
/mol_type="mRNA"
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                                                                                                                                                              'tissue_type="midgut"
                                                                                                                                                                                        sex="male"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (2003)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         column: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        150, Reno,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Young, S. and Tittiger, C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NV 89557,
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EST 24-OCT-2003 Ips pini cDNA

538 499 439 418 379

As per on kit"

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RESULT 5
CB407613
LOCUS
                                                                                                                                 REFERENCE
                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                  ACCESSION
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Matches 354; Conserv
                                                         JOURNAL
MEDILINE
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                                            DEMBUG
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                                                                                                                                                                                      Ips pini
Ips pini
                                                                                                                                                                                                                                                    667 bp mRNA linear EST 24-OC
IFG028F05 251470 JH III-treated male I. pini midguts Ips pini
clone IFG028F05 5, mRNA sequence.
                                                                                   Bigenheer,A.L., Keeling,C.I., Young,S. and Tittiger,C. Comparison of gene representation in midguts from two phytophagous insects, Bombyx mori and Ips pini, using expressed sequence tags
                                                                                                                                                                                                                      EST
Biochemistry Department
University of Nevada, R
                          Contact: Tittiger C
                                                                       Gene 316, 127-136 (2003)
                                                                                                                              Neoptera; Endopterygota; Col
Phytophaga; Scolytidae; Ips.
1 (bases 1 to 667)
                                                                                                                                                            Eukaryota; Metazoa; Arthropoda; Hexap
Neoptera; Endopterygota; Coleoptera;
                                                                                                                                                                                                                                    CB407613.1 GI:37951749
                                                                                                                                                                                                                                                  CB40761
                                            14563559
                                                         22925480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCTTCACCTTGGGTTGTCAAACCCAATGGGATGCTCCTTCTGCCGGTTGGGGTCAACAA
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                                                                                                                                                                                                                                                                                                                                                                                            GTGCAGTGCCCCGCCGAGATCGTTGCCCCGCTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TACGGCGCATTTCGTCGCGCGACCAGTGCGATTCCTTCCCCGGCGCCGCTCAAGCCCGGC 623
                                                                                                                                                                                                                                                                                                                                                                     ATTGĂCTGTCCCGAGGĂGCTCACCAGTCTCACCGG
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                                                                                                                                                                                                     (North American pine engraver)
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55.7%;
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   Reno
                                                                                                                                                             Hexapoda; Insecta; Pterygota;
cera; Polyphaga; Cucujiformia;
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Вb 8 B 5 밁 γ 맑 S 밁 Ş 片 S 밁 Ś 망

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Plate: 028 row: F (
Seq primer: T3 21mer
High quality sequence
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FORWARD: T3 21mer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Howard Medical Sciences
Tel: 1-775-784-6480
Fax: 1-775-784-1419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: crt@unr.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
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                                                                                                                                                  TGCCAGTGGCGGTTTGACTGGTTCCAGAACGCCGACGACGACGACGACGTTCACGTTCCAGCAG 683
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GIGCAGIGCCCCGCCGAGAIC
                                                                                    TGCCACTTCAGATTTGGCTGGTACGAAAATGCTGACAACCCCCAAGTCGAATTCGAACAA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="midgut"
/dev stage="adult"
/clone_lib="JH III-treated male I. pini midguts"
/note="Vector: Lambda Uni-Zap XR, Bluescript SK-; As
Stratagene's pBluescript II XR library construction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Ips pini"
/mol_type="mRNA"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'db_xref="taxon:102803"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 667
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56.0%;
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Pred. No. 2e-06;
0; Mismatches 2
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Tel: 1-775-784-6480
Fax: 1-775-784-1419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bigenheer,A.L., Keeling,C.I., Young,S. and Tittiger,C. Comparison of gene representation in midguts from two phytophagous insects, Bombyx mori and Ips pini, using expressed sequence tags Gene 316, 127-136 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CB408544 11I-treated male I. pini midguts Ips pini cDNA
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1 (bases 1 to 681)
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īps pini
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Seq primer: T3 21mer
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University of Nevada, Reno
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                                                                                                                                    GGCTCGGCCTACTCCTGCGCCGACCAGACTCCCTGGGCGGTGAACGACAATCTCGCCTAC 335
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                                                                          GECTTOGCOGCGACGAGCATCGCCGGCGGGTCCGAATCCTCGTGGTGCTGCGCCTGCTAC
                                                                                                      GETTCTGCCTACGTGTGCAACAACCTCCAACCCTGGGCTGTCAACGACACTCTCGCCTAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             crt@unr.edu
                                                                                                                                                                                                                                                                                                                                                                                                                    /clome_lib="JH III-treated male I. pini midguts"
/note="Vector: Lambda Uni-Zap XR, Bluescript SK-; As per
Stratagene's pBluescript II XR library construction kit"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="midgut"
/dev_stage="adult"
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/clone="IPG007A08"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Department of Chemistry and Biochemistry Office Revenue Technology, Ur 620 Parrington Oval, Norman, OK 73019, US Tel: 405 325 4912

Fax: 405 325 7762
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ren,Q., Tag,A., Peplow,A., Lai,H., Kupfer,C., Peterson,A., Beremand,M. and Roe,B.
Analysis of a Fusarium sporotrichioides EST database
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                            KPRECURSOR (EN
Seq primer: T3
High quality sequence stop: '
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact Dr. Marian Beremand regarding clone availability Included is the best homolog from a blastx search of Genbank nr 04-09-01 633 5e-66 gi 1170140 sp P45899 PUTATIVE ENDOGLUCANASE TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fusarium sporotrichioides
Bukaryota; Fungi; Ascomycota; Pezizomycotina; Sordariomycetes;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: broe@ou.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Bruce A. Roe, University of Oklahoma, broe@ou.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hypocreomycetidae; Hypocreales; mitosporic Hypocreales; Fusarium
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/note="Vector: pBlueScript SK-; Site_1: EcoRI; Site_2: XhoI; 5' end of cDNA cloned into EcoRI site of pBluescript; 3' end of cDNA cloned into XhoI site of pBluescript"
                                                                                                                        cDNA library*
                                                                                                                                                        db xref="taxon:5514"
/clone="olf05fs"
/clone_lib="Fusarium sporotrichioides Tri 10 overexpressed/
                                                                                                                                                                                                                                                                                 /organism="Fusarium sporotrichioides"
/mol_type="mRNA"
                                                                                                                                                                                                                                                   strain="Tri 10"
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Score 130.4; DB 12; Pred. No. 1.3e-05; 0; Mismatches 131;

Length 450;

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Local Similarity
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Location/Qualifiers
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Phytophaga; Scolytidae; Ips.

1 (bases I to 568)
Eigenheer,A.L., Keeling,C.I., Young,S. and Tittiger,C.
Eigenheer,A.L., Keeling,C.I., Young,S. and Tittiger,C.
Comparison of gene representation in midguts from two phytophagous
Comparison of gene representation in midguts from two phytophagous
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Comparison of gene representation in midguts from two phytophagous
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Comparison of gene representation in midguts from two phytophagous
Comparison of gene representation in midguts from two phytophagous
Comparison 
                                                                                                                                                                                                                   Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Coleoptera; Polyphaga; Cucujiformia;
Phytophaga; Scolytidae; Ips.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CB407804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   clone IPG023E05 5, mRNA sequence
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IPG023E05_251852 JH III-treated male I. pini midguts
                                                                                                                                                                                                                                                                                                                                       Ips pini (North American pine engraver)
Ips pini
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CB407804.1
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/dev stage="adult"
/clome_lib="JH III-treated male I. pini midguts"
/clome_lib="JH III-treated male I. pini midguts"
/note="Vector: Lambda Uni-Zap XR, Bluescript SK-; As
Stratagene's pBluescript II XR library construction
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Pred. No. 0.0028;
0; Mismatches 180;
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Best Local Similarity 56.6%;
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University of Nevada, Reno
" "^47041 Sciences Rm. 150, Reno, NV 89557, USA
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Fax: 1-775-784-1419
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: crt@unr.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FORWARD: T3 21mer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTGTTGGTGTGGCTCACGCTGCCCTCAGTGGATATGGTACTACCACCCGTTACTGGGAC 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACTTOCOCGOAGGAGCATCGCCGGGGGGGTCCGAATCCTCGTGGTGCTGCGCCTGCTAC 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GETTCTGCCTACGTGTGCAACAACCTCCAACCCTGGGCTGTCAACGACACTCTCGCCTAC 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ggcTcggcCTAcTcCTgcGccgAcCAGACTCCCTGGGCGGTGAACGACAATCTCGCCTAC 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCGCTRAAGATGGTGTCACCGTTGTRAAACGCCTCTGTCCACTCTGGTTGTGACTATGAG 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rgcgargccaactrccagggcrgrocgactrcaatgrccagrcgggcrgcaac---GGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTTGCAAACCATCCTGTGCCTGGAAAGAAAATGTTGGAGACCTGGACCCTGTCGTATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCTGCAAGCCGTCGTGCGCTTGGCCCGGGAAGGCCGCCGTCAGCCAACCGGTCTACGCG 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTGGCGGCGACTGGGAAGTAACCAGTTCGATATGCCCATGCCCGGCGGCGGCGGCGGCGGC 515
                                                                                                                                                                                                                                                                                                                                                                                                                   ATCTTCACC 473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCTTCAAC 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCEGTEGTGACTTAGGATCCAACCAATTCGACATTCAAATCCCCCGGAGGTGGTGTTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      quality sequence stop:
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Ips pini"
/mol_type="mRNA"
/db_xref="taxon:102803"
/clone="IPG023E05"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone lib="JH III-treated male I. pini midguts" /note="Vector: Lambda Uni-Zap XR, Bluescript SK-; As Stratagene's pBluescript II XR library construction k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="midgut"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . 568
                                                                                                                                                                                                                                                                                                       2004, 11:38:55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           - CCAACAACTTAGCTGGAAAGACTTTCATCGTCCAAAACATCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (backward)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
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Pred. No. 0.0027;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180;
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